

**Remarks/Arguments:**

**Claim Status**

Claims 22-49 are currently pending. Claims 26-29, 31, 32 and 34 are withdrawn from consideration. Claims 39-41 and 43 stand objected as being dependent upon a rejected base claim, but would be allowable if rewritten into independent form.

Support for the amendments to claims 22 and 45 and new claims 46-49 may be found in Figures 1 and 2 and in the clean copy of the substitute specification at, *inter alia*, page 15, lines 5-24 and in the paragraph beginning at page 18, line 18. No new matter has been added.

**Rejections Under 35 U.S.C. §102 and §103**

Claims 22-25, 36-38, 42, 44 and 45 stand rejected under 35 U.S.C. §102 as anticipated by U.S. Patent No. 5,813,230 to Hartl. Claims 22-25, 36-38, 42, 44 and 45 stand rejected under 35 U.S.C. §102 as anticipated by U.S. Patent No. 6,233,932 to Heibel. Claims 30, 33 and 35 stand rejected under 35 U.S.C. §103 as unpatentable over Hartl or Heibel. Applicants respectfully request reconsideration of the rejection of these claims for the reasons set forth hereinafter.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." M.P.E.P. §2131 *citing Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "To establish a prima facie case of obviousness, ... the prior art reference (or references when combined) must teach or suggest all the claim limitations." M.P.E.P. §2143. Claims 22 and 45 recite features that are neither disclosed nor suggested by the cited references.

More particularly, independent claim 22 recites a "[b]rake-by-wire actuator for actuating the brake system of a motor vehicle, comprising a simulator which can be acted upon by a brake pedal, with an output signal of an actuation sensor being sent to an electronic control unit which controls a pressure source in response to the signal of the actuation sensor, and with an output of the pressure source that is connected to a distributor device for the brake force and actuates individual wheel brakes of the vehicle, also comprising means for enabling actuation of the brakes by muscular power within a fallback mode, wherein a first actuation component,

defined by the brake pedal or a component articulated at the brake pedal, and a second actuation component that is connected downstream in the flux of force are configured relative to one another such that **the first actuation component remains mechanically uncoupled in a non-force-transmitting manner from the second actuation component during a by-wire mode with a lost travel remaining between the first and second actuation components during the by-wire mode.**" Independent claim 45 recites similar features.

As background, because the first actuation component is mechanically uncoupled in a non-force-transmitting manner from the second actuation component during a by-wire mode, vibrations or disturbances that are produced by the braking system of the vehicle are not transmitted to the brake pedal and felt by the driver of the vehicle in the by-wire mode. In contrast, the cited references teach a spring that is located between two actuation components. Such a spring would transmit vibrations produced by the braking system of the vehicle through the brake pedal of the vehicle in a by-wire mode, which would be felt by a driver of the vehicle.

With regard to U.S. Patent No. 5,813,230 to Hartl, the Office Action cites to the first rod 1 of Hartl as equivalent to the first actuation component and the end 33 of second rod 3 of Hartl as equivalent to the second actuation component. Applicants respectfully submit that, contrary to the claimed invention, the first rod 1 and the second rod 3 (including its end 33) of Hartl remain mechanically coupled in a force-transmitting manner during a by-wire mode (referred to as the normal case in Hartl). As explained in the paragraph beginning at column 3, line 66 and illustrated in Figure 1 of Hartl, a spring 2 extends between the two components 1 and 33. The spring 2 mechanically couples the two components 1 and 33 during the by-wire mode. In the by-wire mode (referred to as the 'normal case' in Hartl), Hartl teaches that actuation of the brake pedal displaces rod 1, which displaces spring 2, which displaces rod 3, which displaces pistons 7 and 11 until the breather hole 18 is closed by piston 7 (see column 3, lines 14-33). Because the spring 2 couples the first rod 1 to the second rod 3 in a force-transmitting manner, Hartl does not disclose a first actuation component that remains mechanically uncoupled in a non-force-transmitting manner from a second actuation component during a by-wire mode. Thus, Hartl does not disclose or suggest each feature recited in claims 22 and 45.

With regard to U.S. Patent No. 6,233,932 to Heibel, the Office Action cites to the input member 60 as equivalent to the first actuation component and the pin shaped-projection 66 of the primary piston 16 as equivalent to the second actuation component. Applicants respectfully

submit that, contrary to the claimed invention, the input member 60 and the primary piston 16 (including its pin shaped-projection 66) of Heibel remain mechanically coupled in a force-transmitting manner during a by-wire mode (referred to as a booster stage in Heibel). As best shown in Figure 1, the brake pedal 58 bears on a plate 86; the plate 86 bears on one end of a spring 74; the opposing end of the spring 74 bears on another plate 78; the plate 78 bears on one end of a hollow piston 40; and the opposing end of the hollow piston 40 bears on the primary piston 16. Because Heibel's input member 60 bears on the primary piston 16 at all times, Heibel does not disclose a first actuation component that remains mechanically uncoupled in a non-force-transmitting manner from a second actuation component during a by-wire mode. Thus, Heibel does not disclose or suggest each feature recited in claims 22 and 45.

For at least the foregoing reasons, it is respectfully submitted that claims 22 and 45 are in a condition for allowance. Claims 23-25, 30, 33 and 35-44 each depend from claim 22 and are allowable for at least the reasons set forth above. Withdrawn claims 26-29, 31, 32 and 34 each depend from allowable generic claim 22 and should each be reinstated and allowed.

Reconsideration and allowance of each of the pending claims are respectfully requested. If the Examiner believes an interview will advance the prosecution of this matter, the Examiner is invited to contact the undersigned to arrange the same.

Respectfully submitted,



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